

# Exhibit 45



Tire technician Juan Cantu works at Tire Town Auto Service in Picayune, Mississippi. Daniella Zalcmán, special to ProPublica

## Overinflated: The Journey of a Humble Tire Reveals Why Prices Are Still So High

From a rubber plantation in Southeast Asia to a repair shop in Mississippi, the story of a tire highlights the turmoil of the post-pandemic economy and its uncertain future.

by **Michael Grabbell**

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**THE TROUBLE THAT** brought Heather Brown to Tire Town Auto Service in Picayune, Mississippi, had started with a shake as she drove down the interstate. The tires she relied on to guide her gold 2014 Nissan Rogue and grip the asphalt when she braked seemed to shift and bounce unpredictably. The 29-year-old single mom had purchased the used SUV in early 2022, and when she brought it to a dealership, a mechanic diagnosed a condition that was potentially dangerous for Brown and her 10-year-old son: The steel cords in all four of her tires were separating.

Brown replaced two of the tires in July and tried to save for the other two. But inflation kept eating away at her paycheck from her \$14.31-an-hour job at a nursing home. So, needing the tires and with Christmas on the way, she took out a personal loan and pulled up to Tire Town on a drizzly Saturday morning in late November.

Tire Town sits at the intersection of Mississippi Highway 43 and U.S. Highway 11 near a Waffle House, a supermarket and a Family Dollar. Unlike the instantly recognizable fast food chains and box stores that anchor the American landscape, tire shops tend to blend in along highways and access roads. Grimy. Tedious. Necessary. Most Americans, rich or poor, have had the experience of popping a tire, upending their day and forcing them to wait in a tire shop with strangers who've had the same miserable luck.

Brown, who has wavy dirty blond hair and wore a gray sweatshirt and jeans, clutched her keychain as she approached the counter.

"Hi, I called about the tires," she said hesitantly, quickly adding, "The Nissan Rogue."

Brianne Williams, a Tire Town salesperson, pulled up Brown's records on a computer. "You just need two of them, right?"

"Yeah, just two," Brown said.

Williams went over some options, describing Tire Town's road hazard package, which includes free flat repairs and discounts on replacements if the tires are damaged before the treads wear out.

"How much is it?" Brown asked.



Heather Brown, a 29-year-old single mother, replaced two of her SUV's tires last November and had to take out a loan to afford the expense. Daniella Zalcmán, special to ProPublica

It's a question that has echoed across America these past two years as the price of almost everything reached new heights. Retail counters have become the front lines of sticker shock, a place to vent frustrations about an amorphous global economy that's strangled people's ability to make ends meet.

The lowly tire shop, it turns out, may be one of the best places to examine the post-pandemic recovery and its uncertain future. Tires have been buffeted by nearly every force driving inflation since the pandemic began — from border shutdowns that prevented migrant workers overseas from reaching rubber plantations to the war in Ukraine's toll on an obscure but essential ingredient in tires called carbon black. Americans depend on tires to get to work, to get groceries — essentially to live, in much of the country. But unlike food and gas, tires aren't something people typically budget for.

The average price of tires has risen 21.4% over the past two years, more than 70% higher than core inflation. A tire that previously cost \$100 might now cost \$120; one that was \$250 might be \$300. That's not counting labor, and people often have to buy more than one tire.

While inflation has eased since last summer, increased prices for many items, including tires, are proving sticky. Widely debated issues like lingering supply chain problems and rising wages are not the only reasons. As consumer brands pushed prices higher last year, many corporate executives noted an economic paradox. Customers continued to buy their products anyway. That led some companies to rack up record profits. Now, as the economy slows, many of the costs that drove inflation have fallen away. Yet the leaders of well-known brands continue to bet — sometimes baldly in investor calls — that they can keep prices high, almost ensuring that consumers will feel the effects of inflation long into 2023.

Brown's need for a loan to buy tires has become surprisingly commonplace amid the worst period of inflation since the early 1980s. Scores of people have taken to GoFundMe over the past year, pleading for help to buy tires so they could get to work and doctor's appointments. One parent wrote of seeing her son's preschool teacher regularly use a portable air compressor to fill her tires at the end of the day. A young mother in California said she sold her prom dress and her toddler's play kitchen to try to raise enough money for tires.

After she got her loan, Brown called around to a few tire dealers. A couple of places didn't have her tire size in stock. The Nissan dealership wanted \$550 for the two tires. "That was ridiculous; that's more than a car payment," she said, laughing. "I only had \$137 in my bank account after bills — and that was before groceries."

Standing at the counter, Brown waited for Williams to tell her the cost. On the shop's TV, the kid in the movie "A Christmas Story" was triple-dog-daring his friend to press his tongue to a flagpole, as other Tire Town customers waited on a worn black-vinyl couch.

The optional road hazard package, Williams said, would bring her bill to \$393.56.

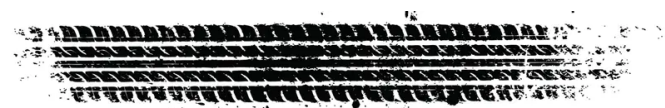
Without it, the tires and installation cost \$346.50.

That was already about \$40 more than Brown had paid for the tires she had bought there four months earlier. Life wasn't great at the moment. Her son's birthday was two weeks before Christmas and, with bills and food, there was no way she could afford a party or gifts. Brown declined the additional package. She gave her keys to Williams and walked outside to wait for a ride.



Brown's son, Brantley, plays in front of their home. Brown was financially stretched by the expense of new tires coming shortly before Christmas and Brantley's birthday. Daniella Zalcmán, special to ProPublica

The paperwork Brown held in her hand offered no insights as to why tire prices had risen so sharply. But there would be a clue on her new tires. Each was stamped with an identification number that could be traced to where and when it was made. I wrote down one of the numbers — 00B KP RB1A 4521 — and set out to retrace the path of her tire across the globe, from the rubber trees to the repair shop, to understand why prices were really going up.



**THE STICKER SHOCK** that Brown saw at Tire Town started more than two years earlier in a stand of rubber trees. Before Brown's new tire was even a ribbon of tread, part of it was a trickle of white latex dripping out of a tree in Southeast Asia. Rubber tappers sliced a groove into the bark, allowing the milky fluid to spiral down the tree into a container. Exposed to air, the latex coagulated into a lump before being collected by tappers and sent to a processing plant. The rubber was then shredded, dried and packed into blocks, which look like chewy granola bars the size and shape of hay bales.

Passenger and light truck tires are 19% natural rubber, according to the U.S. Tire Manufacturers Association. And as COVID-19 swept through Asia in 2020, major rubber producers like Thailand and Malaysia shut their borders to slow the spread of the virus. This public health precaution had a ripple effect: Migrant workers from neighboring countries couldn't reach the plantations. The lack of labor led to



a drop in production. The supply was further weakened by extreme weather and fungal leaf disease that struck just as the demand for latex gloves soared. By early 2021, rubber futures had spiked nearly 50% from the year before.

The Vietnam Rubber Group, the main natural rubber supplier to the factory that made Brown's tire, was also affected, as the pandemic and heavy storm damage created what the company called a "double disaster." Rubber harvesting and processing was suspended for long periods because of COVID-19 cases and travel restrictions. Then, starting in September 2020, nine storms bombarded the company's plantations, unleashing winds and flash floods that toppled and uprooted rubber trees and triggered landslides that blocked critical roads, it said in its annual report.

But natural rubber was only one part of the problem, and to understand why, consider the complex science of tires. To some degree, tires are about as unsexy and primitive as the lump of rubber many people mistake them for. The wheel, after all, dates back thousands of years. The goal of creating a smooth ride with a material that can withstand bumps hasn't changed much since 1887, when a Scottish veterinarian named John Boyd Dunlop wrapped the wheels of his son's tricycle in sheet rubber, filled them with air and noticed how much better they rolled than the wheels made of wood or metal at the time.

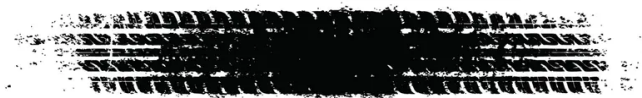
Over the last century, however, chemists and engineers have fiddled with that formula to make tires more agile, more durable, more fuel-efficient, quieter, better at braking on slick roads and able to perform as well in extreme heat as extreme cold. "We ask tires to do conflicting things," said Howard Colvin, a retired tire industry chemist who once led Goodyear's polymer research group. When driving on the freeway, we want tires to have as little friction as possible. But when braking in emergencies, we want them to be able to endure as much friction as possible. "When you think about what we ask a tire to do," Colvin said, "the fact that tires and tire engineering can do it, to me, it's pretty remarkable."

Tires need natural rubber to resist tears, synthetic rubber polymers to improve traction and keep the tire inflated, steel wire and textile cord to provide stability and a soot-like filler called carbon black to reinforce the rubber. By the summer of 2021, when the components for Brown's tire were likely being purchased, the prices of all those materials were starting to go up.

And it only got worse. Synthetic rubber and carbon black, which together make up roughly half the weight of a car tire, are made from petroleum. As oil prices soared in the summer of 2022, so did the cost of materials for making tires. It wasn't just that Russia's invasion of Ukraine and the resulting sanctions had tightened the global oil supply. Russia was also the second-largest exporter of carbon black. The powder is the essential ingredient that gives tires their color and strength, and tire and rubber goods factories scrambled to secure a supply.

"Without carbon black, a tire would be like a rubber band," Colvin said.

And the material doubled in price in two years.

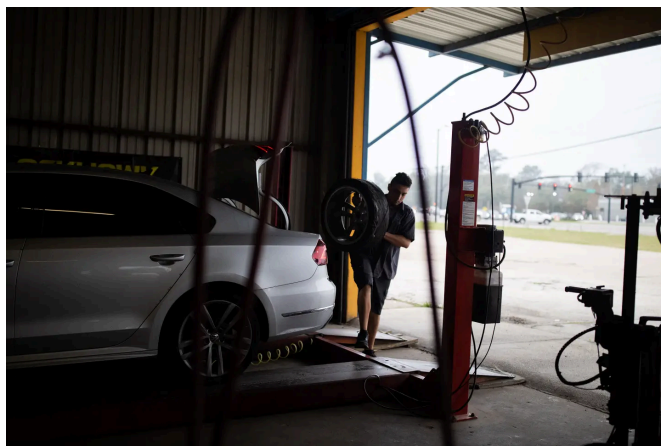


**JUAN CANTU, A** technician at Tire Town, started up Brown's Rogue and carefully pulled it into the fourth service bay and onto a red automotive lift. He read the work order for the brand, model and size of the tires needed — Milestar MS932 Sport, size 225/60R18 — and headed out back across a gravel lot to one of the metal sheds where Tire Town kept its stock.

It was dark inside, and Cantu maneuvered through a warren of tires, some stored in orange racks, others stacked in columns up to 12 tires high. He removed several from one of the stacks and pulled out Brown's new tires.

"932," he said, confirming the model.

With one tire in each hand and a Maverick-brand cigarette dangling from his lips, Cantu, 24, hauled the tires back to the garage.

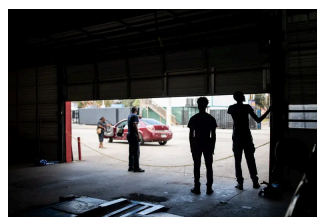


Cantu grew up in Texas, where he helped his dad work on cars. After he moved to Mississippi, he decided to work in tire shops. Daniella Zalcmán, special to ProPublica

Tire Town’s owner, Kevin Cates, never intended to go into the tire business. He got an MBA and went to work for Philip Morris, climbing the corporate ladder to a finance position at the company’s office in Zug, Switzerland. But in 1998, after his wife’s mother got sick, they decided to move back to New Orleans, where Cates helped his father-in-law and brothers-in-law run the family tire business, Delta World Tire.

After getting divorced, Cates purchased the Tire Town chain in 2012, with shops in New Orleans, Baton Rouge and Slidell, Louisiana. He later closed the Baton Rouge location and added a store in LaPlace, Louisiana, as well as the one in Picayune. He sells name brands like Michelin and Goodyear but has carved out a niche in the discount market, seeing Asian imports as a better value for his cost-conscious customers. And while most shops rely on distributors, Cates buys many of his tires by the shipping container directly from factories in Asia. That practice has given Cates, who is 60 and wears tortoiseshell glasses, a rare perch to watch the economy’s ups and downs firsthand.

“I’ll have a customer tell me he bought a tire a year and a half ago, and the price has gone up at least 30% — they can’t believe it,” Cates said. “My guys on the counter see that every day.”



Owner Kevin Cates at the Tire Town in the Gentilly neighborhood of New Orleans. The shop has seen the ups and downs of the post-pandemic economy firsthand. Daniella Zalcmán, special to ProPublica

Unlike the typical waiting rooms of Tire Town’s other locations — with a hazy glare, coin-operated candy machines and 4-year-old Sports Illustrateds strewn on a table — the Picayune shop exhibits an industrial chic remodel, with corrugated chrome wainscoting and faux whitewashed shiplap on the walls.

The morning Brown dropped off her car, Tire Town’s customers included court clerks and truck mechanics who commute to New Orleans, 60 miles each way. Picayune had once been known as the “Tung Oil Center of the World” because of its orchards of tung trees, whose nuts produce an oil used in wood varnish. But many people moved there from the New Orleans area after Hurricane Katrina.

The New Orleans metropolitan area has experienced some of the highest inflation in the country over the past year, according to Moody's Analytics. Rural areas like those near Picayune have been hit hard. A nationwide study by Iowa State University found that while urban households saw their discretionary income fall by 13% from June 2020 to June 2022, inflation cut rural households' discretionary income nearly in half. "Not having this extra financial cushion," the study's authors concluded, "puts rural families at greater risk for increased debt, default, and potential bankruptcy."

Like many businesses, Tire Town struggled at the beginning of the pandemic, as people stayed home and stopped driving. But as the economy reopened, traffic picked up — and so did the stores' sales. A semiconductor shortage, caused in part by a splurge on consumer electronics during lockdown, meant automakers couldn't get the chips needed for new vehicles. That led car prices to skyrocket, putting them out of reach for many buyers.

"People are having trouble buying the new cars that they want," Cates said. "So they're keeping their cars longer, and therefore fixing them." Last year, the average age of cars and light trucks in the U.S. hit an all-time high of 12.2 years.

Decades ago, tires generally came in a few dozen standard sizes. But eventually automakers began to demand tires that were specific to a model and upgrade package. As of May 1, Michelin listed 432 different sizes on its website.

The changes have given tire manufacturers a great deal of pricing power. Tires come in four pricing tiers, ranging from top-of-the-line brands to generic imports, theoretically giving customers a choice. But since tire dealers now have to carry so many sizes, they may only have a couple of brands in stock. And drivers tend to flock to the few that have name recognition.

For most customers, a tire is — as one industry veteran put it — a "grudge purchase." They have little time to shop around and a huge information gap. "Consumers don't really have a frame of reference on what a tire should cost, because you only buy them every few years," said Phillip Kane, a business consultant and former executive at Goodyear and Pirelli. Bill Wood, an economist who studies the plastics and rubber industries, was more blunt: "They can tell you it's going to cost whatever it's going to cost, and as long as it doesn't sound like it's made out of gold, you're going to say, 'OK.'"

Since the start of 2021, manufacturers have announced dozens of price increases, sometimes amounting to double-digit percentage hikes. Yet customers have continued buying. "If we could make more, we can actually even sell more in the environment that we're seeing," Goodyear CEO Richard Kramer told investors in February 2022. That confidence hasn't always been enough to appease investors. The same day Kramer made that comment, Goodyear's stock tanked more than 25%, as investors feared whether the company could overcome rising raw material and ocean freight costs. Since then, Goodyear has repeatedly tried to reassure investors that it has enough pricing power to charge more and boost profits. "Our increase in the replacement tire prices more than offset our costs," the company's chief financial officer said at its next earnings call, reiterating the point a half-dozen times.

Goodyear recently announced layoffs and weaker-than-expected financial results, but the company said it hasn't seen any decreased demand for its premium tires. It hopes the combination of higher prices and declining material costs in the second half of 2023 will allow it to increase its profit margins. Though Goodyear hasn't announced new price hikes this year, Michelin, Bridgestone and Pirelli all increased their U.S. tire prices in January.



Goodyear has faced increased raw material and supply chain costs, leading it to raise prices multiple times. The company said customers have been willing to pay the higher prices. Daniella Zalcmán, special to ProPublica

“Although our results — and the results of other players in the industry — have recently been negatively impacted by rising input and manufacturing costs,” a Goodyear spokesperson said, “our objectives are to generate competitive margins and deliver returns for our shareholders.” Michelin and Pirelli said their decisions were based on ongoing instability and inflation. Bridgestone did not respond to requests for comment.

As more affluent drivers continue to buy name-brand tires, Tire Town’s price-conscious customers have been trading down, Cates said. People who used to buy midrange brands are now opting for budget tires. People who might have replaced all four tires are trying to skate by with two.

That’s boosted demand for budget tires. Each week, the Fitment Group, a tire industry data provider in Duluth, Minnesota, analyzes 8 million advertised tire prices from retailers’ websites across the country. And looking at that data from January 2020 to December 2022 shows a startling trend: For many tire sizes, the cheapest tires have gone up twice as much in price as premium brands.

Customers like Brown have little choice but to pay up.

In the shop, Cantu stacked Brown’s new tires next to her Rogue. Stamped on the sides beneath the Milestar logo, amid load limits and safety warnings, was the string of letters and numbers that make the tires’ origins traceable. The first three characters were “OOB.” For safety reasons, the U.S. Department of Transportation has assigned a code to every tire factory in the world. This one belonged to the Casumina Radial Tire Factory in Uyen Hung, Vietnam, about an hour’s drive north of Ho Chi Minh City.



**INSIDE THE BABY** blue factory in an industrial area along the Dong Nai River, the materials that would become Brown’s tires were loaded into giant mixers. The machines blended several batches of gummy black substances, each carrying different chemical compositions. The compounds were then sent to other machines to be pressed into sheets and strips. Strands of steel wire were coated in rubber and formed into two hoops to make the edges of the tire, known as the beads, which lock the tire onto the wheel.

Those hoops were then placed onto a rotating drum along with a sheet of rubber that would form the inner liner of the tire. From there, several plies and belts of different rubbers — some embedded with polyester, nylon and steel — were laid on top and pressed together to build the body of the tire.

“A tire is a complicated product,” said Nguyen Dinh Dong, Casumina’s deputy general director. “To make it, it needs many, many processes.”



The process can be seen in videos of the Casumina factory, which opened in 2014. It was perfect timing for the company, which started after the Vietnam War selling to the local market and exporting bicycle tires to socialist countries in Eastern Europe. The United States imported few tires from Vietnam in 2014, but that was about to change.

The Obama administration had been waging a trade battle against Chinese tire manufacturers, which it accused of flooding the market to undercut the U.S. industry and harm American workers. The administration was about to impose another round of penalties, and tire companies were shifting their work to factories in Thailand and other parts of Southeast Asia.

Today, more than three-quarters of passenger replacement tires in the United States are imported, according to Tire Business, a trade publication. The import value of passenger tires from Vietnam boomed to \$390 million last year — about 20 times what the United States imported a decade ago. Casumina is now the 66th largest tire manufacturer in the world, according to Tire Business. The factory where Brown's tires were made produces more than a million tires a year.

"Last year was very, very difficult for us," Nguyen said. The cost to ship its tires to the United States jumped from \$2,000 to \$16,000 per container. And with raw materials prices rising, it had to raise the prices it charges its U.S. buyers by 8%, he said.

Even though Casumina makes the tires, Milestar isn't actually the company's model. It's a brand produced for Tireco, one of the largest American tire distributors, based in Gardena, California. The company also markets Westlake, Nankang and Patagonia tires and calls Milestar "the official tire of adventure." Not that Brown planned to climb winding mountain roads, as shown in the company's promotional video. The MS932 Sport is what's known as an all-season touring tire, meaning it provides a comfortable ride and can handle most weather conditions. It's available in more than 60 sizes.

Tireco declined to comment, but in industry publications it has said its goal is to create a tire that can perform as well as a midrange tire but at a budget price.

Just before Brown's tires were made, as raw material costs were already putting pressure on prices, another problem flared up for Tireco and Casumina. The Biden administration believed that tires from South Korea, Taiwan, Thailand and Vietnam were being unfairly subsidized and dumped in the U.S. market. And it was threatening to slap penalties on them, which would increase the price to import them.

Victor Li, Tireco's executive vice president, had testified before the International Trade Commission in May 2021 that the company's brands "service a critical segment of the U.S., which U.S. producers have shifted away from." Tireco had tried to produce its tires in the United States, he said, but domestic manufacturers had "no interest," focusing instead on the premium market. Penalizing imports, he said, would not bring production to the United States; it would only raise prices.

But the commission wasn't swayed, and the Biden administration imposed the penalties. One of the brands that Tireco distributed, Nankang, which was made in Taiwan, was hit the hardest, with duties over 100%. The administration also determined that Vietnam had manipulated its currency to give its exports a competitive advantage, but it spared tiremakers like Casumina from the stiffest penalties.

Those global policy decisions trickled down to Tire Town in Picayune, which was seeing an ever-changing mix in where its tires were coming from. "It used to be we'd always see China," said Dennis Sarchet, the Picayune store manager. "Then we got to where we started seeing a lot from Thailand and Indonesia. And now I'm seeing more and more coming out of Turkey." In fact, the two tires that Brown bought in July had been made in Turkey.

Now, her new tires were working their way through a factory in Vietnam. A machine that acts like a big waffle iron molded the Milestar tread pattern onto each tire. Steam heated the tire to about 300 degrees to bond its components together and harden the rubber. When the mold lifted, it revealed not only the treads but the string of characters stamped on the side: "OOB KP RB1A 4521."



The last four numbers correspond to the 45th week of 2021, meaning that Brown's tire was made sometime between Nov. 8 and Nov. 14, 2021.

It was a terrible time to try to ship tires to the United States.

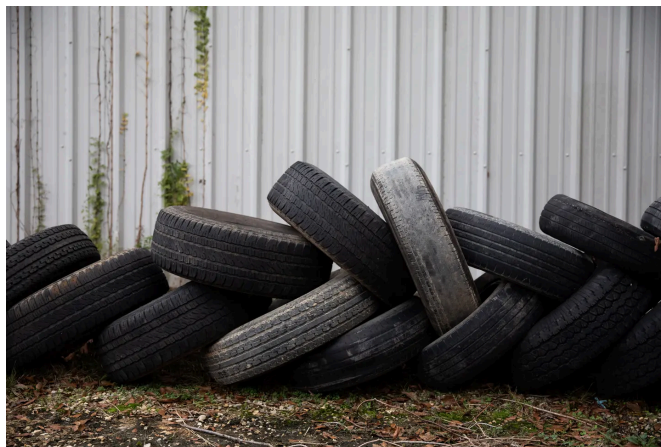


**THAT WEEK, 111** cargo ships lined up at or outside the ports of Los Angeles and Long Beach, waiting for dockworkers to unload hundreds of thousands, if not more than a million, containers full of goods like furniture, appliances, toys and tires. A consumer buying binge during the pandemic had stretched the supply chain to its limits. Shipping rates soared as retailers raced to get their products onto shelves before the holidays.

Importers, including tire companies, complained to regulators that the world's biggest ocean carriers were taking advantage of the situation by ignoring their contracts, forcing them to pay inflated rates to get their products to the United States. Though carriers denied it, businesses said the freight companies were also tacking on exorbitant fees for shipping containers that couldn't be picked up or returned on time because of port congestion.

At Tire Town, Cates struggled to get the tires his customers needed. "Our suppliers were charging us \$2,500 shipping surcharges, \$5,000, \$10,000. It got up to \$15,000 to \$16,000," he said. "Imagine what that does to the price of the tires that I have to pass on to my customers. And that's before I have to factor in the price of the raw materials and labor that manufacturers are passing on to us."

Cates is a member of one of North America's largest tire-buying groups, where independent retailers like him band together to negotiate prices directly with manufacturers. The group was founded in the 1990s as Walmart and Sears began to use their buying power to offer discounts that other tire dealers couldn't match.



The average price of tires has risen 21.4% over the past two years, more than 70% higher than core inflation. Daniella Zalcman, special to ProPublica

With the buying group, Cates rarely had to worry about getting tires from overseas. Whenever he needed more, he'd place an order and about 90 days later a truck carrying a container full of 750 to 820 tires would arrive at his shops. Getting tires was so easy that Cates had a side business distributing tires to local repair shops. The manufacturing shift from China to Southeast Asia had lengthened the lead time on orders to 120 days. But as the shipping backlogs grew in late 2021 and early 2022, delivery times were running over 200 days, he said.

Usually about half of the 25,000 tires that Cates sold each year came in shipping containers directly from factories. But while Tire Town received 24 containers in 2020, in 2021 it received less than 10. “Inventory is a big deal in the tire industry,” Cates said. “People are in the market for a tire for 24 hours. If you don’t have it, they’re going somewhere else.”

Because of the supply chain problems, Cates had to depend more on distributors like Tireco. But Tireco was having its own difficulties. It discontinued its factory-direct order process, according to Tire Business, and started running all its tires through its 1.1 million-square-foot warehouse in Southern California. “We expect the next nine months to continue to be challenging, but we are confident in our partners and our ability” to fulfill orders, Andrew Hoit, then Tireco’s vice president of sales and marketing, told the trade publication Modern Tire Dealer in November 2021.

It’s difficult to know exactly when Brown’s tires arrived in the United States. Government import records collected by ImportGenius, which tracks global shipping, show that from February through June of last year, Tireco received at least 172 shipments from Casumina, totaling 626 containers of tires. Most of the shipments left from Vietnam’s Vung Tau Port and arrived at the ports of Long Beach and Los Angeles.

Brown’s tires eventually made their way to Kentucky-based distributor Rudolph Tire. Tire Town’s general manager, Andrew Washington, said they were part of an order he placed with Rudolph’s Dallas warehouse that arrived at the New Orleans Tire Town shop in either a van or a box truck in early October. From there, Tire Town loaded them, along with a pile of other tires, into the back of a white Chevrolet pickup and drove across Lake Pontchartrain to Picayune, where the tires sat in a shed awaiting the work of Juan Cantu.



Cantu looks for replacement tires inside a shed behind Tire Town in Picayune. Daniella Zalcmán, special to ProPublica

**CANTU FLICKED A** switch on the lift and raised Brown’s SUV a few feet so its tires would be at shoulder level. New tires are typically mounted on the rear of a car to provide greater traction and prevent hydroplaning. So, Cantu first needed to take off the rear tires that Brown had bought in July and rotate them to the front. He wielded an impact driver, a tool that looks and sounds like a high-powered drill, and unscrewed the lug nuts from the driver’s side wheels. He pulled the rear wheel off and bounced and rolled it to a machine called a balancer.

When a tire is changed properly, the wheel should be “balanced” to ensure that weight is distributed equally to prevent vibrations and uneven wear. Cantu slid the wheel onto the machine’s spindle, locked it in place and lowered the machine’s plastic hood. The wheel automatically spun as a computer measured the imbalance. If the wheel was out of balance, Cantu would have to correct it by adding small steel weights

to the rim. Many technicians will work on one tire at a time, but as the rear wheel spun, Cantu returned to the Rogue and pulled off the front wheel.

“I like to multitask to keep my momentum going,” said Cantu, who wore a goatee and speaks with a deep drawl from growing up in Texas. He placed the front wheel on a tire changer — a machine that technicians use to remove a tire from the rim — and let the air out of the tire, unleashing an ear-piercing hiss.

Once the air wheezed out, he placed the wheel next to a metal arm on the tire changer that wedges under the tire’s edge to unseal it from the rim, a process known as “breaking the bead.” With the tire now hanging from the rim like an ill-fitting collar, Cantu easily pried it free and rolled it onto a pile of old tires.

Returning to the balancer, Cantu checked the reading. The wheel was indeed out of balance. Cantu chiseled the wheel’s old weights off of its rim and scraped the inside of the rim clean. Using red lights like those in a supermarket barcode scanner, the machine pinpointed where Cantu needed to place the new weights. He hammered a 0.75-ounce clip-on weight onto the outside rim and, from a drawer, pulled out a rectangle of weights divided into pieces like a chocolate bar. He broke off a 2-ounce piece and stuck it inside the rim. The tire was now balanced and ready to go back on the SUV.

With that task done, Cantu peeled the sticker off the new Milestar tire. He brushed its edges with lubricant and pressed it onto the rim that had been waiting on the tire changer. He then used a part of the machine called a duck head — because of its shape — to pry the tire over the rim. Next, Cantu grabbed the air hose and filled the tire until it made two satisfying pops, indicating the tire was sealed.

Multitasking again, Cantu placed the new tire on the balancer. He then lifted the other one and remounted it onto the driver’s side front. He slid the wheel onto its hub, fastened the lug nuts by hand and then tightened them with the impact driver. *Zth-oom! Zth-oom! Zth-oom! Zth-oom!*

After adding a quarter-ounce weight to the wheel with the new Milestar tire, he rolled it to the back of the SUV and repeated the process. *Zth-oom! Zth-oom! Zth-oom! Zth-oom!* The driver’s side was now done.

Finding technicians like Cantu has become increasingly difficult. While the U.S. economy has regained the jobs it lost during the pandemic, tire dealer employment numbers remained below their pre-pandemic levels until December, according to the Labor Department.



Cantu saw his wages increase significantly over the past two years as tire dealers struggled to find technicians. Daniella Zaloman, special to ProPublica

Some of the reasons are obvious. Tire work is heavy, repetitive and dirty. Technicians typically get paid close to entry-level wages, like workers at warehouses, restaurants and big-box stores. There’s a lot that can go wrong.

“You have to make sure the car is lifted properly and safely,” Cates said. “You have to have the right tire sizes. You have to have the right speed ratings. You have to make sure the tire is set properly and tightened

to a certain torque specification. When mounting a tire, you have to make sure you don't scratch the rim. There's tire pressure involved. You need to make sure there aren't problems with sensors.

"It's a lot more technical than it sounds," he continued. "It's not just something that you can just hire a guy. You're always debating: Should you hire a guy with the right experience or hire a guy with the right attitude and train him?"

Cantu, who moved to Mississippi from Texas three years ago, said he started at Delta World in early 2021 at around \$10 an hour but quickly got a series of raises before being recruited by Tire Town in March 2022 with an offer of \$16.50 an hour. "I probably went through like six raises in the course of a year," Cantu said. "I worked for it, though."

Rising wages led Tire Town to raise its labor rate for tires from \$40 an hour to \$50, an added cost that would be baked into Brown's bill.

Cantu repeated the process of changing the tires on the passenger side. He tightened all the wheels to the precise measure of torque and filled the tires to 35 pounds per square inch of pressure. Then he took a swig from a bottle of Sprite.

He pressed the switch to lower the lift. He headed to the sink to wash his hands and then slid back into the driver's seat. About 45 minutes after he began, Cantu fired up the ignition, backed the SUV out of the garage and parked it in front of the shop.



**THE PICAYUNE SHOP** closes at noon on Saturdays, and by 11 a.m. it was nearly empty. The sequel to "A Christmas Story" hummed on the overhead TV as Williams and Sarchet waited for customers to pick up their cars.

"Five years ago, there would be eight to 10 cars waiting here when we opened," said Sarchet, who has a long white "Duck Dynasty" beard. "I just think that people don't have the money to spend like they used to."



Dennis Sarchet, manager of the Tire Town in Picayune, at his home in Louisiana, where he works on cars in his time off and even has tire machines. Daniella Zalcoman, special to ProPublica

Tire Town would sell the Picayune location at the end of the year, but for now it was entering its slow period, when the cold weather keeps people inside and away from tire stores — and when Tire Town barely breaks even. To make matters worse, the supply chain had finally opened up. While that might seem like a blessing, the shops were suddenly flooded with tires ordered in the spring.



Normally, when businesses are stuck with too much supply, it results in lower prices. But for products like tires, that tenet doesn't always hold. It goes back to tires being a "grudge purchase." Unlike with refrigerators or smartphones or cars, it's tough to lure customers to upgrade their tires.

The dynamic seen in this small tire chain is perhaps a microcosm of the larger economy: Prices seem to be holding for other products as well. Retailers have complained about having too much inventory and not enough warehouse space. That's resulted in slower factory orders, causing ocean shipping rates to fall back to normal. But many companies have been stuck in higher contracts negotiated during the supply chain crisis — and sales are keeping up with supply. So the expected savings hasn't worked its way through the economy.

And it hasn't filtered down to customers like Brown. Her "grudge purchase" was wrapping up. Williams called Brown to let her know her car was ready and that the store would be closing soon.

"She did say she was on her way," Williams told Sarchet.

"So, everybody else has picked up?" he asked.

"Umm-hmm."

The door swung open. The driver of a 1995 Ford Bronco wanted to know if the shop had an Interstate car battery. Several minutes passed, and another customer needed an oil change.

Around 11:30 a.m., Brown walked in and approached the counter.

"\$346.50," Williams said.

The tires themselves came to just over \$250. The price of Cantu's work installing the tires was about \$40, plus \$15.99 to change the valve stems of the tire pressure sensors. There was a \$10 shop supplies fee, a couple of tiny fees for disposal and \$22.54 in tax.

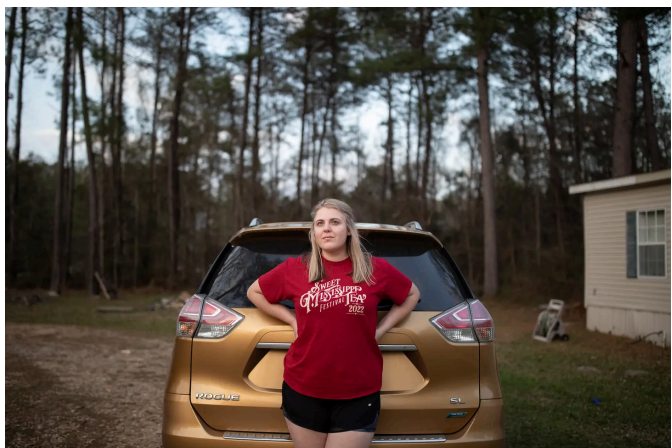
"I just gotta switch the money over," Brown said, picking up her phone to transfer the funds. "I try to keep it in my savings account so that way I won't touch it."

After Williams ran her card, Brown walked out to look at her new tires. They'd traveled more than 10,000 miles from a factory in Vietnam to the shop in Picayune. They'd traversed a pandemic, a volatile raw materials market, a consumer spending boom, a trade war, a supply chain crisis and a labor shortage. Now they sat on the rear axle of her Rogue, ready to do the thing they were destined to do.

Brown started up the engine and put her SUV in gear. She now felt confident that she and her son could travel the roads safely. But obstacles undoubtedly lay ahead as she navigated a world in which higher prices have become the norm, and companies fight to hold on to their new profit margins.

The tires rolled through the parking lot as she steered toward the exit. She turned right and sped off toward the interstate.





At last, Brown's grudge purchase for her Nissan Rogue was over. Daniella Zalcman, special to ProPublica

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